

1.3 Contemporary trends and issues of higher education

According to statistical data [27], the number of students of higher educational institutions of Ukraine decreased by $\sim 10\%$ compared to 2009, but compared to the data for 1999, it increased by almost 35%. However, the reasons for students to get an education 10 years ago were somewhat different. At that time, higher education in Ukrainian society was a sign of a certain status. However, now young people are getting higher education for the purpose of self-expression and self-realization, to achieve the set goal, to build a successful career in the chosen professional field. So, the process of achieving the set goals is perceived in a completely different way, and at the same time, requirements for the training, conducting classes and teaching staff are changing. A modern student is more focused on independent work and work in a team/group than direct contact with a teacher.

European integration processes in Ukrainian society, despite the harsh realities of nowadays, are related to requirements for the quality of education and management of the quality of education. First of all, this concerns compliance with DSTU ISO 9001:2015, where international requirements are clearly established for the final result. [28-29]

According to modern researches, the main factors of ensuring the quality of education in Ukraine are:

- ✓ the data of the entrance competition,
- ✓ the prestige of the higher education institution among the applicants/in society,
- ✓ the level of preparation of applicants;
- ✓ financial opportunities and sources of funding of universities;
- ✓ professional training of teaching staff; quality of educational process organization;
- ✓ introduction of the latest technologies and scientific achievements into the educational process;
- ✓ involvement of students in research activities;

- ✓ presence and quality of educational equipment, textbooks, manuals, technical means, in particular office equipment;
- ✓ use of information technologies (such as video lectures, chat sessions, etc.);
- ✓ existence of a teaching control and evaluation system;
- ✓ availability of a quality monitoring system;
- ✓ employers' satisfaction with the quality of specialist training students' satisfaction with the quality of professional training, the expertise of the teaching staff and the organization of the educational process,
- ✓ contacts with leading foreign specialists, communication with employers and graduates; stimulation of independent work of students, motivation of students for quality education. [30-32]

The main means for evaluating the quality of education are the following: traditional (prestige of higher education institutions), reputational (based on expert evaluations), effective (based on objective indicators), general, democratic (benefit of a higher institution for society), scientific (compliance with standards), managerial (customer satisfaction), consumer (the consumer himself determines quality). [32, 34].

The level of quality of education in Ukraine is based, firstly, on compliance with the standards of higher education of Ukraine and international standards and their observance.

The purpose of this analysis is to determine the factors influencing the qualitative study of "safety" disciplines (such as "Fundamentals of Occupational Safety", "Occupational Safety", "Life Safety"), which belong to professional training in the context of obtaining a quality education.

According to valid legislation and current international standards, it is considered that a person who has obtained a higher education can hold positions related to management. Thus, in order to be a middle manager, a person with a higher education must be responsible for subordinates and the work process. Therefore, the study of the mentioned disciplines is necessary and relevant regardless of the field of activity of the future university graduate due to the need to be aware of the issue of

ensuring labor safety, maintaining the production environment at an appropriate level, attracting specialists to create appropriate working conditions.

New approaches in the implementation of proper teaching of these disciplines can be formulated as follows:

- 1) Application of the advanced means of implementation of the educational process.
- 2) Origination and implementation of the competence approach, taking into account the specifics of the professional sphere.
- 3) Taking into account the requirements for the implementation and provision of inclusive education in higher educational institutions.

Therefore, we will consider in more detail the indicated approaches in teaching and the problems associated with them.

Competency approach. In Article 1 of the Law of Ukraine “On Higher Education”, the concept of "competence" is interpreted as “a the ability of a person to successfully socialise, study and conduct professional activities that arise on the basis of a dynamic combination of knowledge, skills, ways of thinking, views, values and other personal qualitie”.

By increasing the effectiveness of training, everyone can get a competitive education. Competence is actually the final result of training, it can be a reference point in the training of a specialist. First of all, practical knowledge that will reflect the readiness for professional realization of the person and the quality of education.

The system of such knowledge is implemented and provided in educational programs, textbooks, methodical manuals or other methodical support. However, the availability of knowledge is only the first degree of mastering the basics of life safety culture, the main thing is the importance of a positive attitude towards them, conviction of their importance and necessity. The task of developing students' potential, motivation, their desire to acquire knowledge and practical skills, creative activity and professionalism belong to the problems that must be solved by the higher school. A personal approach to each student (or group of students) taking into account their

professional orientation, including creative activity, is necessary for the implementation of the above.

The quality of education and the effectiveness of the acquired knowledge are relevant not only for Ukraine, such fundamental studies were carried out for 9 countries of different continents, although for school education, as a starting point for higher education [35], where the author noted the subjectivity of the obtained results, taking into account do not take the human factor.

In the study of the European Commission [36], it was noted that the earlier activities to improve the efficiency of work in the field of education are implemented, the better. If EU member states, first of all, direct their public investments to increase the share of educated people with disabilities in early childhood and at the school level, then they do not necessarily have to choose between efficiency and quality. Only if they wait until potential students reach university and adult education age are their efforts sometimes ineffective and shoddy.

The specificity of teaching the discipline "Fundamentals of Occupational Health and Life Safety" is the combination of sections covering a wide range of knowledge from various fields, namely law, physiology, chemistry, physics, biology, mathematics, general concepts of psychology, etc. Another feature of this discipline is that it belongs to the block of mandatory non-specialist disciplines. It is these factors that sometimes become an obstacle for the perception of educational material, since not all students have basic training at the appropriate level in the specified subjects. Thus, the first obstacle appears - non-perception, so the teacher's task (from the first lesson) becomes to create an atmosphere of simplicity and curiosity so that each student finds something "their" in which he understands and orients himself well.

The motivation for studying the discipline is the relevance of the discussed topics and the way the material is presented. According to a survey conducted among undergraduate students, the following trend is observed: students are motivated to attend couples, first of all, by the practical application of the acquired knowledge, then by the interest and informativeness of the classes, then by evaluation, and lastly by the obligation to attend couples.

According to 87% of the respondents, adaptation to the subject takes place after two classes of each type (lectures, practical classes, laboratory classes), the rest of the respondents believe that adaptation to the method of conducting classes and the manner of presenting the material takes place already in the first class.

The components that affect the attendance of lessons are arranged in the following order of priority: interesting lecture material, the manner of presenting information, the type of final control, the need to work on the missed material and what time the lecture is. All noted that it facilitates the study of the discipline of the application of IT and associations. At the same time, it must be emphasized that the usage of dialogue technologies both live and through distance learning is the main link in the assimilation of technical information by humanities students.

Visualization in the form of slides (presentations) or demonstrations of real devices and personal protective equipment is a better perception of the material. According to the majority (43%) of humanities students, topics such as safety psychology and providing first aid will have the greatest practical significance for them; 14% each - occupational disease and labour hygiene and safety equipment; 12% - fire safety; 9% - legislation and organization of labor protection; 28% - believe that all sections that study the disciplines "Fundamentals of Occupational Health and Safety" will be of practical importance in later life.

The survey [48] conducted among students showed that one of the motivations for studying "safety" disciplines is the practical value of the acquired knowledge in later life, the second (no less important indicator) was the competence and professional training of the teacher, while 30% of the surveyed students indicated that it was important for them personal characteristics of the teacher are important.

As experience shows, students of humanitarian and technical fields perceive well the material presented in the form of illustrations and diagrams that promote associative thinking.

The final control of students' knowledge clearly indicates the specific problems of learning the educational material, first of all, it is unsystematic, the lack of deductive

analysis of the information received, the "detachment" of the received knowledge from practice, that is, the inability to apply the acquired knowledge to a specific situation.

The reasons for the gap between theoretical and practical knowledge are:

1) Lack of connection of acquired knowledge with previously studied disciplines (prerequisites), i.e. lack of interdisciplinary connections and low level of general knowledge;

2) Lack of interest of students in studying the disciplines "Fundamentals of Occupational Safety", "Occupational Safety", "Life Safety", psychological orientation to study professional disciplines, as such, which are necessary in the future;

3) The limited number of classroom hours does not provide an opportunity to interest students more, sometimes elements of a "dry presentation of the material" are introduced, that is, the possibility of providing interesting practical examples that always enliven the lecture and keep the student in a state of constant curiosity is reduced.

In general, according to these investigations, the means of increasing the efficiency of assimilation of educational material, and, therefore, increasing the quality of acquired knowledge, are the interest of classes, direct contact with the teacher, clarity of information, practical significance, and the use of information and computer technologies.

Thus, the quality of the acquired knowledge depends on many factors (the expertise of the teacher, the material and technical base of the university, the basic knowledge of the students, etc.), but you cannot teach someone who does not want to know. An important problem is not what knowledge students should acquire, but how this knowledge should be assimilated, that is, by what methods and means of learning.

Modern means of implementing the educational process. As already mentioned, the learning process in the modern world is not only the acquisition of certain knowledge or skills, but also a continuous process of processing information with the aim of developing the abilities of the individual and its self-realization in society. Each epoch makes its own corrections in the educational process, in particular, technical and technological development expands the possibilities of both the teacher and the student.

At the same time, new demands are placed on the subjects of the educational process, so a modern teacher must speak at least two or three languages, be able to use technical means, use Internet resources and software products, and, of course, be fluent in educational material taking into account achievements modernity.

One of the forms of teaching disciplines is distance learning. Previously, distance education was implemented through correspondence and external forms of education, but now this concept is interpreted more broadly.

And yes, the term "distance learning" was officially introduced in 1982, when the International Council for Correspondence Education changed its name to the International Council for Distance Learning. It was then that the international community began interpreting this term in broader terms, although the technical capabilities (in particular, communication) were very small by today's standards.

In 2013, a meeting dedicated to distance education was held in Davos, which was attended by ex-Secretary of the US Treasury Larry Summers, Microsoft founder Bill Gates, MIT President Raphael Reif, co-founder of the PayPal payment system Peter Thiel and other famous people. The key conclusion of this event was the thesis: the future is in online education. That is why, in time and in step with progress in Ukraine, the "Regulation on distance learning" was adopted in April of the same year [37]. According to which, distance learning is understood as an individualized process of acquiring knowledge, abilities, skills and ways of cognitive activity of a person, which takes place mainly through the mediated interaction of participants in the educational process who are distant from each other in a specialized environment that functions on the basis of modern psychological and pedagogical and information and communication technologies. Thanks to this Regulation (Amended in accordance with the Orders of the Ministry of Education and Science No. 660 dated 01.06.2013, No. 761 dated 14.07.2015) the methods and forms of implementing this concept and the means and types of knowledge control were clearly outlined in Ukraine. As a result, since 2016, it became possible to study according to the individual form in general educational institutions, and later - in universities.

During distance learning, students must perform interconnected tasks, such as reading manuals and textbooks, using reference books and encyclopedias, listening to or watching lectures, taking notes, and communicating. At the same time, under these circumstances, they have the opportunity to watch the video lectures several times (if necessary), thus using one of the advantages of distance learning that is not available in the case of traditional lectures.

Over the past 2-3 years, online learning has become a regular part of our lives. At first, COVID-19 changed the usual life of the whole world, and later Ukraine was shaken by an even greater disaster - a full-scale invasion of the Russian Federation. New realities have changed all spheres of life of Ukrainians without exception, including the sphere of education. Many people were forced to migrate, which made online learning one of the main trends that young people quickly picked up. Regardless of the form of education (school or higher), they all significantly optimized these opportunities.

It is clear that online education solves many problems, because you can study anywhere and at a convenient time. The advantages are that there are different ways to share information, it is difficult to be late for classes if you have access to the Internet, and of course, it saves money on conducting classes.

In the Netherlands, in 2016, the impact of an online learning environment supported by worked examples and peer feedback on students' writing of argumentative essays and acquisition of subject knowledge in the field of biotechnology was investigated. As part of a larger project, a pre- and post-examination study was administered to 45 undergraduate students who were randomly paired. The results showed that the combination of worked examples and peer feedback improves the quality of writing an argumentative essay and facilitates the acquisition of subject knowledge, and in this regard, online learning is not the key point. [38]

For example, in the United Arab Emirates, a study was conducted to determine the attitudes of students towards their online learning experience during the first few weeks after the mandatory transition to this type of learning due to COVID-19. Second-year General English students at the University of Abu Dhabi were asked to write their

impressions a week before the final exams of the second semester of the 2019-2020 academic year. These essays were analyzed using open coding. The results of the analysis showed that speed, security, convenience and improved participation in the learning process were the most frequently mentioned positive qualities of the online learning experience, while distraction and reduced concentration, high workload, problems with technology and the Internet, and insufficient support from on the part of instructors and colleagues were mentioned as the most repeated negative aspects. Therefore, the results of the study [39] established the problems of students in the process of online learning under abnormal circumstances, and also gave a clear understanding of the needs and expectations of students from such a process.

Another similar study was conducted in Vietnam, in one of the private universities. Researchers studied the advantages and disadvantages that students experienced while studying in an online group at Van Lang University. The study involved 60 students from freshmen to seniors who are studying foreign languages at Van Lang University (VLU) and already have online learning experience. They answered questionnaire questions to indicate what they encounter when working in a group over the Internet. The results show that while some students found collaborative virtual learning methods useful in terms of distance and eliminating time and financial constraints, other students had problems with interaction and concentration.

In addition, the findings suggest that some technical issues, such as Internet connectivity and poor computer skills, are still a major threat, leading to controversial issues among teammates. However, some distractions such as social networks, noisy environments and chatty participants also affect learning progress. The research suggests that e-learning is such an evolution in education; however, it is ineffective for online group learning. Thus, some positive and negative aspects of collaborative online learning have been clearly identified so that universities and teachers can look for opportunities to solve the problems and enhance the positive aspects of online learning. [40]

As an example of a successful implementation of distance learning, the "Master of Management" educational program of Telkom University (Indonesia), which was

first implemented in 2014 and facilitates the participation in the work of the program for full-time employees. Using the method of percentage analysis, participants of the distance learning program at Telkom University claimed that the implementation of elements of distance learning 76%-88% is in the very good category. The elements of the distance learning effect significantly affect the effectiveness of e-learning at Telkom University. [41]

However, along with expanded opportunities, distance learning limits live communication, direct contact with the teacher (which is still an important component of learning for many students).

The significant disadvantages of online education are the lack of constant contact (for 30%), in particular visual contact, in some cases laboratory and practical classes do not fulfill their educational functions, because in essence the student watches a video where the teacher does all the work, and the student acts in the role of an outside observer who only passively participates in the performance of work and "collects" data for further processing. Another problem arises, which directly affects the teacher: not all teachers have the skills to work on certain platforms, and the manner of live presentation by some teachers is transferred to the online format of classes, but here it works differently. In addition, the health condition of both teachers and students worsens (eyesight, posture, etc.), emotional contact is lost not only in the teacher-student tandem, but also in the group among classmates. [47]

So, distance education is one of the means of expanding the opportunities of people with special needs, disabled people in obtaining proper education and self-assertion, however, at this stage, distance education in Ukraine has inherited many features of correspondence form of education.

Inclusive education. According to Article 19 of the Law on Education, persons with special educational needs are provided with education on an equal basis with other persons. That is why inclusive education is considered as a component of the humanitarian policy of every modern state, which proves to what extent society protects inalienable human rights, in fact, these concepts are gradually included in the educational process in Ukraine. Obtaining a competitive education can be achieved by

increasing the level of educational efficiency. The main thing is that competencies are the final result of training, they can be a reference point in the training of a specialist, and classroom classes (in particular, practical classes) should help to get a quality education, in particular, for people with special needs.

For example, Canada is often seen as a leader in inclusive education and disability. As the German scientist Andreas Ginz wrote back in 2006, Canada "included the features of its educational systems." This opinion is true of four of the 13 provinces and territorial jurisdictions in Canada. With the advent of inclusive education, a socially just approach to education and students with disabilities of various backgrounds gradually developed throughout the country. The governments of many countries consider inclusive education as a system of values that does not involve education in the same groups for all pupils (students). These governments support a model of special education for those students who are unable to benefit from education in the same conditions as their peers. The three Northern Territories and the Atlantic province of New Brunswick, inclusive, also believe that education reflects a society's system of values and priorities. However, these jurisdictions have gone beyond special education model. They account for its reliance on varying levels of segregation for many students with disabilities based on social justice and predominantly academic socialization. These four education systems are designed and use organizational and pedagogical strategies that support the involvement of all pupils (students) in regular educational activities. [43]

Although the Korean experience of special education in the public education system is limited, inclusive education for students with special needs (SN) has been a national policy focus since the mid-1990s. Since then, Korean educators and administrators have focused on revising and regulating special education policies, guaranteeing the rights of students with SN to study, as well as supporting the quality of teachers to strengthen inclusive education. This activity has led to progress in supporting inclusive education. However, much remains to be done to achieve the proper results. In Korea, the main challenge for inclusion is the need to transform the existing atmosphere of educational institutions from a competitive one to a

collaborative one that focuses on each person, meaning that strong leadership from principals and administrators is needed. The Korean experience has challenges in implementing disability awareness programs at the national level to improve social acceptance. Thus, there is a need for closer cooperation and stronger partnerships between mainstream and special education lecturers. All lecturers must have a positive attitude and perception of students studying in the specialty, and for this, it is necessary to provide conservative and professional education to promote among teachers the concepts inherent in inclusive education. Each year, more students with SN want to participate in inclusive education, and mainstream and special education teachers, along with administrators and parents, believe that inclusive education is a worthy ideal for educating students with SN. [44]

Over the past few years, the Japanese government has shifted its legislative and policy approaches to disability in education toward a more social model that emphasizes rights and social justice and promotes greater inclusion of people with disabilities. Of particular note is this adoption of the concept of reasonable accommodation, which can perhaps be seen as a proactive legal action. After many years of discussion and development of legislative and policy tasks in 2014 Japan finally ratified the UN Convention on the Rights of Persons with Disabilities, and since April 2016, legislation has been created regarding the "Elimination of Discrimination against Persons with Disabilities" in areas such as education and employment. [45].

The USA has a long tradition of research and practice in special education in the form of inclusion. Since the passage of the Individuals with Disabilities Education Act (EAHCA) of 1975, now called the Individuals with Disabilities Education Act (IDEA) of 2004, all children with disabilities have access to a free, appropriate public education. However, the inclusion of students with disabilities in mainstream classrooms has been considered a challenging practice for decades. Controversy, research, and legislation have shaped collaboration between general and special education. A wide range of political, epistemological, and institutional factors contributed to a more enlightened, child-centered education. However, a review of current issues and practices regarding the inclusion of students with disabilities for

students with mild to moderate and selective significant disabilities to provide them with an equal and appropriate educational experience in mainstream classrooms. [46]

In fact, even in the most developed countries of the world, problems related to inclusive education in higher education are relevant, and Ukraine is no exception in this regard.

According to the information presented by UNESCO, inclusive education is "the process of addressing and responding to the various needs of students by ensuring their participation in education, cultural events and community life, and reducing exclusion in education and the educational process", so the main task is to implement legislation in practice.

An analysis of possible means of improving the effectiveness of learning materials by students with special needs, for example, studying the discipline "Basics of Occupational Safety and Life Safety", showed that the difficulty of presenting and presenting the material to people with special needs, first of all, increases if students have problems in the group of different nature (impairment of hearing, vision, musculoskeletal system, etc.).

If ramps are built for students with mobility problems in most educational buildings, their movement within the educational buildings is limited, but there is no particular impact on the educational process itself and the study of subjects (in 90% of cases). The situation is more difficult in laboratory and practical classes, since students with SN cannot be fully involved in the performance of individual tasks. In this case, the attitude of fellow students to a specific person and his problems is important, the friendly atmosphere in the group is a factor that facilitates the assimilation of educational material and the acquisition of necessary knowledge and skills by students with special needs.

A separate category is people who do not have any physical disabilities, but are short (below 140 cm). The difficulty of working in pairs for such students is related to the height of the chairs/tables, the location of the equipment, etc. The actual acquisition of knowledge depends solely on the ability to adapt to the conditions of a specific room, in this situation the role and qualifications of the teacher are of secondary importance.

As for students with hearing impairments, the main difficulties arise in the first 2-3 lessons, since it is during this period that all students adapt to a new discipline. However, hearing-impaired students have additional problems adapting to the teacher's presentation of the material and the way the material is presented. In such a situation, visual methods of presenting information such as slides, handouts (especially reference) are appropriate. For a better understanding of the material, visualization in the form of slides (presentations) or demonstrations of real devices or examples, personal protective equipment, etc. is best suited. At the same time, the majority of students with hearing impairments are able to lip-read well, so there is a need for good articulation from the teacher, especially during lectures. [47]

In groups consisting of students with vision problems, the verbal component and the presentation of slide material in a certain color scheme are of great importance.

The correct presentation of the material motivates to study. However, according to a study conducted among undergraduate students, the performance of students with SN is better in those groups where there is better interaction between all students in the group.

The components that influence the learning of educational material by students from SN are arranged in the following order of priority: method of presenting information, manner of presenting information, help from classmates, help from relatives (or/and friends). All interviewees noted that it facilitates the study of the discipline of the use of IT and associations.

For the majority of interviewees (~ 95%), the presence in the group of students with special needs does not affect the assimilation of educational material among regular students. [47]

According to the results of the exams, the best results were shown by those students who had a larger number of classroom classes and a high level of attendance and support from fellow students of SN students. In such groups, the number of positive evaluations ("excellent" and "good") is 85-93%. The use of a virtual learning environment significantly affects the final outcome for students with limited mobility. However, all students (100%) note the obligatory high level of the teacher's

professionalism, and almost all respondents (85%) note the importance of classroom classes and consultations.

However, the majority of students noted that live communication and individual consultations are important for them, rather than independent study, while 37% of the surveyed students indicated that the teacher's personal characteristics are important to them.

In general, inclusive education aims to place special education students in general classrooms, which provides equal learning opportunities within the limits of their differences in learning opportunities.

Summarizing the conducted analysis, it is possible to single out the following main approaches in solving the problems of studying "safe" disciplines in higher education institutions for students to receive quality education:

- 1) Ensuring the acquisition of the necessary competencies within the disciplines "Fundamentals of Occupational Safety", "Occupational Safety", "Life Safety" for the possibility of full professional realization.

- 2) Increasing the number of classroom hours and adapting disciplines to the professional orientation of students.

- 3) Using, if possible, different teaching methods, applying modern IT achievements.

- 4) Organization of educational classes taking into account the presence of students with special needs in groups.

- 5) High professional level of the teaching staff and personal approach to each student.

Thus, the main approach to obtaining high-quality higher education should be the transition from laws and directives to greater practical implementation in each specific higher education institution.